What is claimed is:

1. A stator support shaft for an automatic transmission, comprising:

an internal axial bore for receiving an input shaft;

a forward engagement portion for engaging a stator of a torque converter of the automatic transmission;

a central engagement portion for engaging a stator support of the automatic transmission and transferring to the stator support substantially all of a torque load imposed on the stator support shaft by the stator;

a rearward portion positioned rearward of the central engagement portion; and

a first internal circumferential oil seal groove positioned in the internal axial bore of the rearward portion, the first oil seal groove constructed and arranged to receive a first oil seal for establishing a sealing engagement between the stator support shaft and the input shaft and for blocking an axial flow of oil between the stator support shaft and the input shaft originating from the torque converter.

2. The stator support shaft as in claim 1, and further comprising:

a first oil flow bore connecting the axial internal bore with an exterior of the shaft for allowing the oil from the torque converter flowing between the stator support shaft and the input shaft to flow to an exterior of the stator support shaft, the first oil flow bore positioned on the rearward portion of the stator support shaft forward of the first oil seal groove.

3. The stator support shaft as in claim 2, and further comprising:

a second internal circumferential oil seal groove positioned in the internal axial bore of the rearward portion of the stator support shaft rearward of the first oil seal groove, the second oil seal groove constructed and arranged to receive a second oil seal for establishing a sealing engagement between the stator support shaft and the input shaft and creating an oil chamber between the stator support shaft, the input shaft and the first oil seal.

4. The stator support shaft as in claim 3, and further comprising:

a second oil flow bore connecting the axial internal bore with an exterior of the shaft for allowing oil to flow from an exterior of the shaft to the interior axial bore, the second oil flow bore positioned axially on the stator support shaft between the first and second oil seal grooves.

5. The stator support shaft as in claim 4, wherein the oil chamber is axially positioned to connect to an oil flow bore positioned in the input shaft and pass oil from the exterior of the stator support shaft to the input shaft oil flow bore.

6. The stator support shaft as in claim 5, and further comprising:

the first oil seal and the second oil seal.

7. An automatic transmission, comprising:

an input shaft having a forward engagement portion for engaging a turbine of a torque converter;

a first oil seal;

a stator support shaft, comprising:

an internal axial bore for receiving the input shaft;

a forward engagement portion for engaging a stator of the torque converter of the automatic transmission;

a central engagement portion for engaging a stator support of the automatic transmission and transferring to the stator support substantially all of a torque load imposed on the stator support shaft by the stator;

a rearward portion positioned rearward of the central engagement portion; and

a first internal circumferential oil seal groove positioned in the internal axial bore of the rearward portion, the first oil seal groove constructed and arranged to receive the first oil seal for establishing a sealing engagement between the stator support shaft and the input shaft and for blocking an axial flow of oil between the stator support shaft and the input shaft originating from the torque converter.

8. The automatic transmission as in claim 7, wherein the stator support shaft further comprises:

a first oil flow bore connecting the axial internal bore with an exterior of the shaft for allowing the oil from the torque converter flowing between the stator support shaft and the input shaft to flow to an exterior of the stator support shaft and to an oil cooler of the automatic transmission, the first oil flow bore positioned on the rearward portion of the stator support shaft forward of the first oil seal groove.

9. The automatic transmission as in claim 8, and further comprising:

a second oil seal;

a second internal circumferential oil seal groove positioned in the internal axial bore of the rearward portion of the stator support shaft rearward of the first oil seal groove, the second oil seal groove constructed and arranged to receive the second oil seal for establishing a sealing engagement between the stator support shaft and the input shaft and creating an oil chamber between the stator support shaft, the input shaft and the first oil seal.

10. The automatic transmission as in claim 9, wherein the stator support shaft further comprises:

a second oil flow bore connecting the axial internal bore with an exterior of the shaft for allowing oil to flow from an oil cooler exterior of the shaft to the interior axial bore, the second oil flow bore positioned axially on the stator support shaft between the first and second oil seal grooves.

11. The automatic transmission as in claim 10, wherein the input shaft includes an oil flow bore and the oil chamber is axially positioned to connect to the input shaft oil flow bore and pass oil from the exterior of the stator support shaft to the input shaft oil flow bore.

12. The automatic transmission as in claim 11, wherein an external portion of the input shaft positioned between and near the first and second oil seals is free of any substantive grooving.

13. The automatic transmission as in claim 12, and further comprising the torque converter.

14. The automatic transmission as in claim 9, wherein an external portion of the input shaft positioned between and near the first and second oil seals is free of any substantive grooving.

15. The automatic transmission as in claim 7, and further comprising the torque converter.